

REMARKS

This amendment is filed in response to the Office Action dated August 31, 2006. In view of these amendment and remarks, this application should be allowed and the case passed to issue. No new matter is introduced by this amendment. The amendment to claims 1, 6, 7, and 8 are supported by specification at page 5, lines 15-20.

Claims 1 and 5-8 are pending in this application. Claims 1 and 5-8 are rejected. Claims 1, 6, 7, and 8 have been amended in this response. Claims 2-4 were previously canceled.

Claim Rejections Under 35 U.S.C. § 102

Claims 1, 5, and 8 were rejected under 35 U.S.C. § 102(b) as being anticipated by Kasajima et al. (*Electrochemical Intercalation/Deintercalation of Lithium at an Isotropic Graphite in a LiBr-KBr-CsBr Eutectic Melt*). This rejection is traversed, and reconsideration and withdrawal thereof respectfully requested. The following is a comparison between the invention, as claimed, and the cited prior art.

An aspect of the present invention, per claim 1, is a molten salt bath for electroforming a metal product. The molten salt bath contains lithium bromide, cesium bromide, and a halide of an alkali metal and/or a halide of an alkaline-earth metal. The sum of a mole fraction of the lithium bromide and a mole fraction of the cesium bromide is set to be within a range from at least 0.5 to less than 0.95 with respect to the entire molten salt bath for electroforming. A mole ratio of the lithium bromide to the cesium bromide (lithium bromide/cesium bromide) is set to be within a range from at least 1.8 to at most 2.5. The halide of the alkali metal is potassium bromide. The metal product is composed of chromium, tungsten, or titanium.

Another aspect of the invention, per claim 8, is a molten salt bath for electroforming a metal product obtained by mixing lithium bromide, cesium bromide, and a halide of an alkali

metal and/or a halide of an alkaline-earth metal. The sum of a mole fraction of the lithium bromide and a mole fraction of the cesium bromide is set to be within a range from at least 0.5 to less than 0.95 with respect to the entire molten salt bath for electroforming. A mole ratio of the lithium bromide to the cesium bromide (lithium bromide/cesium bromide) is set to be within a range from at least 1.8 to at most 2.5. The halide of the alkali metal is potassium bromide. The metal product is composed of chromium, tungsten, or titanium.

The Examiner asserted that Kasajima et al. teach a molten salt bath for electrodeposition, containing lithium bromide, potassium bromide, and cesium bromide with a respective mole fraction of 56.1:18.9:25.0.

Kasajima et al., however, do not anticipate the claimed molten salt baths for electroforming metal products because Kasajima et al. do not disclose the metal product is composed of chromium, tungsten, or titanium, as required by claims 1 and 8. Kasajima et al. disclose a molten salt bath applied to intercalation/deintercalation of lithium at an isotropic graphite. Molten salt baths in accordance with the present invention are directed to electroforming with an electroforming mold. In the molten salt bath of Kasajima et al. lithium is precipitated. On the other hand, in molten salt baths according to claims 1 and 8, chromium, tungsten, or titanium is precipitated.

The factual determination of lack of novelty under 35 U.S.C. § 102 requires the disclosure in a single reference of each element of a claimed invention. *Helifix Ltd. v. Blok-Lok Ltd.*, 208 F.3d 1339, 54 USPQ2d 1299 (Fed. Cir. 2000); *Electro Medical Systems S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994); *Hoover Group, Inc. v. Custom Metalcraft, Inc.*, 66 F.3d 399, 36 USPQ2d 1101 (Fed. Cir. 1995); *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 24 USPQ2d 1321

(Fed. Cir. 1992); *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051 (Fed. Cir. 1987). Because Kasajima et al. do not disclose a molten salt bath for electroforming a metal product wherein the metal product is composed of chromium, tungsten, or titanium, as required by claims 1 and 8, Kasajima et al. do not anticipate claims 1 and 8.

Applicants further submit that Kasajima et al. do not suggest claims 1 and 8.

Claim Rejections Under 35 U. S. C. § 103

Claims 6 and 7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kasajima et al. in view of Uriu et al. (U.S. Pat. No. 5,647,966). This rejection is traversed, and reconsideration and withdrawal thereof respectfully requested.

The Examiner asserted that Kasajima et al. teach an electrodepositing method and a molten salt bath for electrodeposition containing lithium bromide, potassium bromide, and cesium bromide with a respective mole fraction of 56.1:18.9:25.0. The Examiner acknowledged that Kasajima et al. do not teach a resist to selectively mask the substrate. The Examiner relied on the teaching of Uriu et al. of precipitating a metal from an electrolytic bath on exposed portions of a conductive substrate to assert that it would have been obvious to modify the method of Kasajima et al. to selectively deposit metal on an exposed area of a conductive substrate.

Kasajima et al. and Uriu et al., whether taken alone, or in combination, however, do not suggest the claimed method because neither Kasajima et al. nor Uriu et al. suggest a molten salt bath for electroforming containing chromium, tungsten, or titanium to be precipitated and/or a compound of chromium, tungsten, or titanium to be precipitated and precipitating the chromium, tungsten, or titanium at a portion where the conductive substrate is exposed, as required by claim 6.

Kasajima et al. do not suggest that the molten salt bath could be used for other than intercalation/deintercalation of lithium at an isotropic graphite. Further, Uriu et al. do not suggest that alkali bromide can be applied to an electrolytic bath disclosed in Uriu et al. Whether a metal added into a molten salt bath can be satisfactorily precipitated depends on the combination of the metal and the molten salt bath. Neither Kasajima et al. nor Uriu et al. suggest the combination of metals and molten salt baths for electroforming containing chromium, tungsten, or titanium to be precipitated and/or a compound of chromium, tungsten, or titanium to be precipitated and precipitating the chromium, tungsten, or titanium at a portion where the conductive substrate is exposed, as required by claim 6.

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge readily available to one of ordinary skill in the art. *In re Kotzab*, 217 F.3d 1365, 1370 55 USPQ2d 1313, 1317 (Fed. Cir. 2000); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). There is no suggestion in Kasajima et al. or Uriu et al. to modify the molten salt bath of Kasajima et al. so that it contains chromium, tungsten, or titanium to be precipitated and/or a compound of chromium, tungsten, or titanium to be precipitated and precipitating the chromium, tungsten, or titanium at a portion where the conductive substrate is exposed, as required by claim 6.

The only teaching of the claimed molten salt baths for electroforming a metal product and method of manufacturing a metal product is found in Applicants' disclosure. However, the teaching or suggestion to make a claimed combination and the reasonable expectation of success

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must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The dependent claims are allowable for at least the same reasons as the independent claims from which they depend.

In view of the above amendments and remarks, Applicants submit that this case should be allowed and passed to issue. If there are any questions regarding this Amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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